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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,963	03/27/2001	Klaus Lowack	GR 00 P 1583	9891

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EXAMINER

TALBOT, BRIAN K

ART UNIT PAPER NUMBER

1762

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/817,963		LOWACK ET AL.	
	Examiner		Art Unit	
	Brian K Talbot		1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The response filed 10/27/04 has been considered and entered. Claims 1-3 have been canceled. Claims 4-7 remain in the application.
2. In light of the amendment filed 10/27/04, the 35 USC 112 paragraph has been withdrawn.

Claim Rejections - 35 USC § 103

3. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arbach et al. (5,021,129) in combination with Boyko et al. (6,212,769) or Amelio et al. (4,448,804) or vice versa further in combination with Bickford et al. (5,800,858).

Arbach et al. (5,021,129) teaches applying an electroactive layer (32) and then another electroactive layer (34). Patterning of the second layer (34) is performed to form areas (36). These areas (36) are then activated by seeding and then metallized to form conductive traces (see abstract and col. 1- col. 2)

Arbach et al. (5,021,129) fails to teach “pretreating” the entire first layer with an activator which is liquid, a solution, gas or plasma prior to applying the second layer.

Boyko et al. (6,212,769) or Amelio et al. (4,448,804) teach roughening/conditioning the surface of a first dielectric layer prior to the application of a second dielectric layer. This roughening/conditioning improved the adherence of subsequent catalysts.

Therefore, it would have been within the skill of one practicing in the art to have modified Arbach et al. (5,021,129) process by implementing a “pretreatment step” as evidenced

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by either Boyko et al. (6,212,769) or Amelio et al. (4,448,804) because of the advantages associated with such a step, i.e. improving the adherence of the deposited seed.

In addition, it would have also been within the skill of one practicing in the art to have modified Boyko et al. (6,212,769) or Amelio et al. (4,448,804) process by forming and developing the second photoresist prior to applying the seed layer as evidenced by Arbach et al. (5,021,129) because of the expectation of achieving similar results as well as the fact that the amount of seed material utilized could be reduced due to the smaller area for which the seed is applied, i.e. no waste of seed material.

Arbach et al. (5,021,129) in combination with Boyko et al. (6,212,769) or Amelio et al. (4,448,804) fail to teach the thickness of the dielectric films being not greater than 50 microns (about 2.1 mils).

Bickford et al. (5,800,858) teaches a similar process whereby the thickness of the polymer films are from 0.3 to 5 mils in thickness which are imaged, developed and seeded prior to metallization. More than one layer of the polymer can be utilized with the layers being of the same polymeric material.

Therefore, one skilled in the art would have had a reasonable expectation of achieving similar success by modifying Arbach et al. (5,021,129) in combination with Boyko et al. (6,212,769) or Amelio et al. (4,448,804) process by utilizing the same polymeric material for the layers having a similar thickness as evidenced by Bickford et al. (5,800,858).

Response to Amendment

4. Applicant's arguments filed 10/27/04 have been fully considered but they are not persuasive.

Applicant argued that the prior art of record fails to teach a photosensitive material.

The Examiner disagrees. Bickford et al. (5,800,858) teaches polymer films that are imaged, developed and seeded prior to metallization. This clearly is suggestive of a photosensitive material.

Applicant argued that the whole first layer is not activated prior to applying the second layer.

The Examiner agrees in part. While Arbach et al. (5,021,129) teaches patterning the second layer prior to seeding, Boyko et al. (6,212,769) and Amelio et al. (4,448,804) are cited for this reason. Also see remarks spanning pgs. 10-11 of response that states Bickford et al. (5,800,858) teaches activating prior to applying secondary layer.

Applicant argued hindsight.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the

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time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Brian K Talbot", followed by the date "11/12/05".

Brian K Talbot
Primary Examiner
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BKT